# Refine Search

#### Search Results -

Terms	Documents					
L15 & L7	3					

US Pre-Grant Publication Full-Text Database US Patents Full-Text Database US OCR Full-Text Database EPO Abstracts Database

JPO Abstracts Database **Derwent World Patents Index** 

IBM Technical Disclosure Bulletins

Search:

Database:

L16 Refine Search

> Recall Text = Clear

Interrupt

#### **Search History**

# DATE: Tuesday, October 19, 2004 Printable Copy Create Case

Set Name side by side	Query	<u>Hit</u> Count	<u>Set</u> <u>Name</u> result set
DB=P	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; PLUR=YES; OP=OR		
<u>L16</u>	L15 & L7	3	<u>L16</u>
<u>L15</u>	L14 & L4	8	<u>L15</u>
<u>L14</u>	L1 & L2	40	<u>L14</u>
<u>L13</u>	L6 & L5	3	<u>L13</u>
<u>L12</u>	L6 & L9	3	<u>L12</u>
<u>L11</u>	L8 & L3	3	<u>L11</u>
<u>L10</u>	L2 & L3	6	<u>L10</u>
<u>L9</u>	L8 & L7	17	<u>L9</u>
<u>L8</u>	L1 & L4	696	<u>L8</u>
<u>L7</u>	record\$3 SAME orifice\$1 SAME (charg\$3 or discharg\$3) SAME align\$4	316	<u>L7</u>
<u>L6</u>	press\$3 SAME chip SAME head\$1 SAME (thick or thickness) SAME (density or densities)	99	<u>L6</u>
	record\$3 SAME orifice\$1 SAME (port\$1 or opening\$1) SAME wip\$4		

<u>L5</u>	SAME (rub\$4 or slid\$4)	27	<u>L5</u>
<u>L4</u>	record\$3 SAME chamber\$1 SAME nozzle\$1 SAME (path\$1 or way\$1 or direction\$1)	2714	<u>L4</u>
<u>L3</u>	record\$3 SAME ridge\$1 SAME (extru\$4 or exten\$4 or protru\$4) SAME wip\$4	59	<u>L3</u>
<u>L2</u>	orifice\$1 SAME wip\$4 SAME (extru\$4 or exten\$4 or protru\$4) SAME record\$3	110	<u>L2</u>
<u>L1</u>	(liquid or ink) NEAR10 (charg\$3 or discharg\$3) SAME record\$3	22110	<u>L1</u>

# END OF SEARCH HISTORY

#### Hit List

Clear Generate Collection Print Fwd Refs Bkwd Refs
Generate OACS

Search Results - Record(s) 1 through 8 of 8 returned.

☐ 1. Document ID: US 20040021728 A1

Using default format because multiple data bases are involved.

L15: Entry 1 of 8

File: PGPB

Feb 5, 2004

PGPUB-DOCUMENT-NUMBER: 20040021728

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040021728 A1

TITLE: Liquid discharge recording head, liquid discharge recording apparatus, and

method for manufacturing liquid discharge head

PUBLICATION-DATE: February 5, 2004

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47 Umeyama, Mikiya Tokyo JP Koizumi, Yutaka Kanagawa-ken JΡ Yamaguchi, Yukuo Tokyo JΡ Fukazawa, Hideo Kanagawa-ken JΡ Tajima, Hiroki Kanagawa-ken JP Hatasa, Nobuyuki Kanagawa-ken JP

US-CL-CURRENT:  $\sqrt{\frac{347}{347}}$ 

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Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KORAC	<b>Втаки</b> Ве
	كسنيج								1 110.1101 1110.110	0.0	144410	,

☐ 2. Document ID: US 20020036681 A1

L15: Entry 2 of 8

File: PGPB

Mar 28, 2002

PGPUB-DOCUMENT-NUMBER: 20020036681

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020036681 A1

TITLE: Ink set, recording method, recording unit, ink cartridge and recording

apparatus

PUBLICATION-DATE: March 28, 2002

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47

Mafune, Kumiko

Kanagawa

JP

Kanke, Tsuyoshi

Kanagawa

JР

US-CL-CURRENT: 347/100

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☐ 3. Document ID: US 20020012021 A1

L15: Entry 3 of 8

File: PGPB

Jan 31, 2002

PGPUB-DOCUMENT-NUMBER: 20020012021

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020012021 A1

TITLE: Liquid discharge recording head, liquid discharge recording apparatus, and

method for manufacturing liquid discharge head

PUBLICATION-DATE: January 31, 2002

INVENTOR-INFORMATION:

STATE NAME CITY COUNTRY RULE-47 Umeyama, Mikiya Tokyo JP Koizumi, Yutaka Yokohama-shi JΡ Yamaguchi, Yukuo Tokyo JP Fukazawa, Hideo Chigasaki-shi JP Tajima, Hiroki Xokohama-shi JP Hatasa, Nobuyuki Kawasaki-shi JΡ

US-CL-CURRENT: 347/21; 216/27

Full Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWAC	Draw, De
									······································		

☐ 4. Document ID: US 6652084 B1

L15: Entry 4 of 8

File: USPT

Nov 25, 2003

US-PAT-NO: 6652084

DOCUMENT-IDENTIFIER: US 6652084 B1

TITLE: Ink-set, ink-jet recording method, recording unit, ink-cartridge, ink-jet

recording apparatus and bleeding reduction method using it

Full Title Citation Front Review Classification Date Reference Section 1997 Claims KWC Draw, De

☐ 5. Document ID: US 6652062 B2

L15: Entry 5 of 8

File: USPT

Nov 25, 2003

US-PAT-NO: 6652062

DOCUMENT-IDENTIFIER: US 6652062 B2

TITLE: <u>LIQUID DISCHARGE RECORDING</u> HEAD WITH ORIFICE PLATE HAVING EXTENDED PORTION FIXED TO <u>RECORDING</u> HEAD MAIN BODY, <u>LIQUID DISCHARGE RECORDING</u> APPARATUS HAVING SUCH

HEAD, AND METHOD FOR MANUFACTURING SUCH HEAD

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims | Claims | Claims | KWIC | Draw. Dec. | Claims | Claims

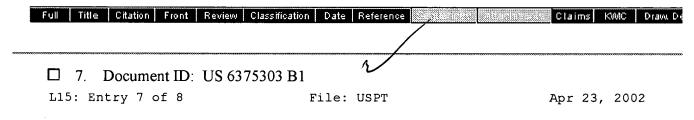
US-PAT-NO: 6460988

DOCUMENT-IDENTIFIER: US 6460988 B1

\*\* See image for Certificate of Correction \*\*

TITLE: Ink set, recording method, recording unit, ink cartridge and recording

apparatus

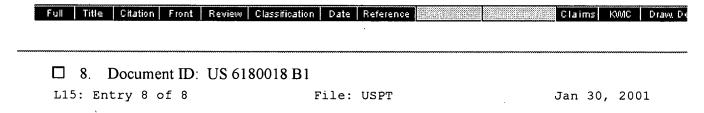


US-PAT-NO: 6375303

DOCUMENT-IDENTIFIER: US 6375303 B1

\*\* See image for Certificate of Correction \*\*

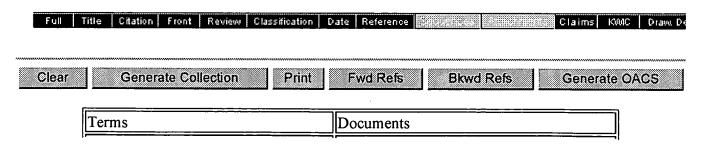
TITLE: Ink jet recording head, ink jet cartridge and ink jet recording apparatus



US-PAT-NO: 6180018

DOCUMENT-IDENTIFIER: US 6180018 B1

TITLE: Ink jet printing head, manufacturing method therefor, and ink jet printing apparatus



L14 & L4 8

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